

ABSTRACT

A Ni-base superalloy of the present invention essentially includes, by weight %, Co: 9 to 11%, Cr: 9 to 12%, Mo: up to 1%, W: 6 to 9%, Al: 4 to 5%, Ti: 4 to 5%, Nb: up to 1%, Ta: up to 3%, Hf: 0.5 to 2.5%, Re: up to 3%, C: 0.05 to 0.15%,
5 B: 0.005 to 0.015%, Zr: up to 0.05%, and the balance of Ni and inevitable impurities. This alloy, as a component material of an industrial gas turbine, has an excellent resistance to corrosion at high temperatures to deal with low-quality fuel and a resistance to oxidation at high
10 temperatures and high-temperature strength to deal with improvement in thermal efficiency due to high-temperature demands and can ensure a high yield at a casting process.